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(54) Title: FABRICATION OF LIGHT EMITTING FILM COATED FULLERENES AND THEIR APPLICATION FOR IN-VIVO LIGHT EMISSION

(57) Abstract: A nanoparticle coated with a semiconducting material and a method for making the same. In one embodiment, the method comprises making a semiconductor coated nanoparticle comprising a layer of at least one semiconducting material covering at least a portion of at least one surface of a nanoparticle, comprising: (A) dispersing the nanoparticle under suitable conditions to provide a dispersed nanoparticle; and (B) depositing at least one semiconducting material under suitable conditions onto at least one surface of the dispersed nanoparticle to produce the semiconductor coated nanoparticle. In other embodiments, the nanoparticle comprises a fullerene. Further embodiments include the semiconducting material comprising CdS or CdSe.

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# INTERNATIONAL SEARCH REPORT

International application No.

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## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : HOIL 21/20; HOIL29/06

US CL : 438/479;16, 22,57; 427/402,407.1; 428/402; 257/13

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 438/479;16, 22,57; 427/402,407.1; 428/402; 257/13

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
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## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X,P --- A,P	US 2003/0034486A (KORGEL) 20 FEBRUARY 2003 (20.02.2003), paragraphs (0094, 009500105,0108,0145,0185,01980201,0225,0226)	1-9,14-18,20-27 ----- 10-13,19
Y	US 6,126,740 A (SCHULTZ et al) 03 OCTOBER 2000(10.03.2004) see summary of the invention	1, 5-9,14-18,20, 24-27
Y	US 6,277,766 A(AYERS) 21 AUGUST 2001(8.21.2001) abstract, col. 8, example	1-9,14-18, 20-27
Y,E	US 6,685,986 A(OLDENBURG et al) 03 FEBRUARY 2004(03.02.2004) see abstract, col.7, lines 55-67)col.11, lines 37-55, example VIII	1-18, 20-27
Y,E	US 2004/0108298 A (GAO)10 JUNE 2004(10.06.2004) see abstract, paragraph 0004, summary of invention	1-9, 14, 17, 20-27
A,E	US 6,710,366A (LEE et al) 23 MARCH 2004(23.03.2004) see abstract, summary of the invention	1-27
Y	6,348,295 A (GRIFFITH et al) 19 FEBRUARY 2002(19.02.2004) see abstract and summary of the invention	1--9,14-18, 20-27

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Further documents are listed in the continuation of Box C.

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